

## housewives were there - and ph.d.'s

Elsewhere in this bulletin is a brief account of the Connecticut Natural Resources Council meeting. Sometimes we find ourselves wondering at such meetings whether they have not been planned to test the audience's mettle with their inhumanly designed chairs, their unbroken series of speeches, their table d'hôte-type luncheons. But, to make up for the seemingly inevitable discomforts, there is always a good feeling of warmth that seems to unite all the people thus gathered together.

This meeting was no exception. The discomforts were there, but, even as we squirmed patiently in our gilt chairs, we were strongly aware of a common bond—and this in spite of amazing differences in outlook and occupation. For example, seated around us were a researcher in animal diseases, a kindergarten teacher, a professor from Yale's graduate school, as well as a number of housewives, schoolchildren, Ph.D.'s, foresters, agronomists, administrators, sportsmen, professional and business men

What was this thing they all shared? It had made many able, trained men among them fold their legs under desks, however reluctantly, day after day, at jobs that paid hardship salaries; it had brought schoolchildren to this meeting to give the adults an unforgettable lesson in conservation at work; it



had impelled a Washington official to plead abjectly for the kind of support he should have had without asking; and had driven many professional men and women to demand more of themselves than they could well afford.

A farmer gave the answer, in a recent survey reported in THE JOURNAL OF SOIL AND WATER CONSERVATION, when he said: "The true soil conservationist . . . knows that all strength comes from the soil. . . . There are many reasons and motives for conserving our soils, 'But the greatest of these is love!'"

LOVE OF THE LAND, springing from intimate first hand knowledge—that was what united all the people at that meeting. It holds together our members as well.

Unfortunately, however, these same people, in their efforts to teach, to learn, to administer, have all too often had to give up those intimate outdoor experiences they love, those pleasant experiences that Mr. Mohr reminded us at the meeting are our most important educational tool, and to which the late Aldo Leopold referred when he said the luckiest man in this field is the one who is priv-

ileged to work directly with the land.

Both these teachers were reminding us that the aim of every educator in conservation is as much spiritual as practical. Love of the land is inspired by the land itself, therefore conservation cannot be adequately taught, only as a second-hand, classroom social study. That's why some of our far-sighted administrators are even now planning to have new schools built on large attractive sites suitable for outdoor study and enjoyment.

And that's why we need more sanctuaries where people can enjoy experiences like these two reported to us recently; the one when Car- rington Howard had a chickadee alight on his hand in apparent recognition, and the other when a Ledyard farmer counted fifty wood duck flying over his house to alight on his pond, where these birds had not been seen in thirty years. We think these were both important experiences, and they were of a kind we can assure our visitors. In simply doing this may not our sanctuary be functioning better than we know?

## notes from n. r. c. meeting

### WILDLIFE MANAGEMENT —

The pattern of land use in Connecticut is not favorable to wildlife. Dairy, poultry, tobacco, potato, fruit and truck farms are not good habitat. Bobwhite have decreased since small grains have ceased to be grown here. New Haven, Middlesex and New London Counties are the best for these birds.

No Southern Bobwhite are now being released by the Conn. Fish and Game department which is trying rather to develop a hardier northern strain. The department is looking for a species of shrub lespedeza that will mature seeds in our climate in order to provide this superior Bobwhite food. (Lespedeza bicolor Natob seems to be the favored species. We are trying this at the sanctuary from stock received through the Soil Conservation Service whose nurseries have now ceased operation.)

Natural Pheasant Reproduction cannot satisfy hunting pressure and must be supplemented with target birds. The amount spent now is \$75,000 annually to release from 30-35 thousand birds

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as compared with \$100,000 formerly for 40-50 thousand birds. Breeders are released, in addition to target birds, either in spring or after the hunting season.

Limited Sums are available from the game department for winter feeding stations and grain patches the former being more economical.

Rabbits are our most popular game animal. No rabbits are now being imported to prevent introduction of disease and parasites to our native healthy stock; and there is no distribution of rabbits from closed to open areas.

Pittman-Robertson Funds are used partly for bulldozer work to create openings which are then fertilized and seeded to legumes, with cover plants along the edges. 35% of the trees in Conn. are up to 20 years old; these are best for game. Only 3% are over 60. The P-R funds are also used for thinning pine plantations, opening

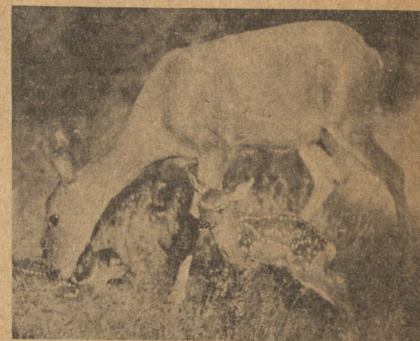
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wood roads and other improvement work.

Deer numbers are limited by feral dogs, and illegal kill. No state wide season is possible.

Grouse benefit by interspersed cover, and the possibilities of bringing in good food and cover for this valuable species with controlled burning is now being explored.

Grey Squirrel are in good supply. As our oak and hickory woods mature, more mast is available to them.



deer and twin fawns from coming screen tour film.

Of the 109 P-R Projects in the last 10 years, 38 have been research projects, 27 land acquisition projects, and 38 developmental projects. The most important now is more acquisition of marsh areas or construction of same on poor lands to help the waterfowl hold their own and to replace destroyed habitat. Fundamental research is needed in the northeast to learn more about puddle ducks of which the blacks are our most important. These are anti-social birds during the nesting season, and small marsh areas are needed to provide more "duck boudoirs." More research is needed on the best way to manipulate water levels and also on less expensive engineering practices to create small ponds. These ponds will cut down the need for more acquisition. (Anyone who has an open marshy area of an acre or so, that may dry up in the summer, can get in touch with the State Board of Fisheries and Game who are interested in improving such duck breeding areas.)

**Raccoon** are increasing in some areas. They need permanent water, tree dens and berry bearing food. Pen rearing has been abandoned, and no animals from the south are being released in order to prevent spread of canine distemper and internal parasites.

**Waterfowl** — Drainage is still the biggest limiting factor. Others are spread of human populations, the use of marshes by industry, the cultivation by farmers of every last acre and increased hunting pressure. In 1944, 7½ million licenses were sold. This number has doubled in ten years, while the increase in sale of duck stamps has increased 96%.

**Geese** can easily be managed and increased.

**Hunters** pay 97% of the cost of waterfowl management. We need excellent law enforcement. The Fish and Wildlife Service can do nothing with their limited personnel. They depend on state officials for this. The layman should report flagrant violations.

**INLAND FISHERIES** — Much stocking is done. Medium sized streams are empty receptacles to receive a larger number of trout than nature could ever provide in Connecticut. Conn. has no really good natural trout streams.

The system of put and take is not very economical. The annual loss of stocked trout is as high as 50%, due to habitat unsuitability and modern methods of breeding which makes them poor survival risks. Our deep infertile lakes are full of warm water species instead of trout. There are about 20 lakes that would be better for small mouth bass. Fertile shallow mud bottom with heavy growths were stocked indiscriminately and provided too many pan and forage fish. 100,000 anglers in Conn. enjoy fishing and that number cannot be satisfied.

**The Fishery Program** includes cooperative programs to remove warm water fish, and to improve streams by removing natural obstacles. Brown trout is the most favored fish; it is called the trout of civilization and has great survival ability. (See note on stocking program elsewhere in this bulletin.)

A complete preliminary survey of all lakes and ponds is needed in order to make a detailed plan for each.

The program includes efforts to develop warm water fish culture, to provide technical assistance, to acquire public access points, to work with lake property owners associations.

**SALT WATER FISH** — There are 300 different kinds, 1/100 of all known species, occurring off Conn. waters where 15 million pounds a year are caught, worth a million and a half dollars. This is twenty times less than Massachusetts. Oysters and black back or winter flounder are by far the most important commercially but the trouble is that most of them are

first shipped to New York and then back to Conn., so that the Conn. housewife has to pay extra middlemen's costs and doesn't get local fresh fish. Long Island and Block Island Sound are highly productive biologically which accounts for the good fishing.

**THE NEW ADVISORY BOARD** of the fish and game department wants to give the department a chance to carry out its planned program. Through P-R funds \$18,000 will be used for a small marsh program, \$9,000 for engineering, and \$13,000 for state forest plantations.

**An Educational Program** is planned; a publicist is to be hired, and a state magazine published.

**CHILDREN** from the Farmington school have formed a club which has 161 members. They plant fir trees; sell holly to raise money; have a tree nursery; have released pheasant; put out feeding stations; visited fish hatcheries, state forests, stock farms, neighbors' farms, Christmas tree plantations, water supplies, ponds. They keep animals in classrooms. They learn identification and preservation of animals, plants, etc. They learn fire prevention, tree planting; have garden club flower shows; show films to elementary grades, provide them with feeders; hold an annual pet show and a wildlife exhibit; have a nature trail on 25-acre school woodland.

**At New Haven State Teachers' College** the biology courses are all integrated with ecology. 350 teachers have been so trained since 1950.

**THE NATIONAL WILDLIFE FEDERATION** sells \$400,000 worth of stamps a year. The money is used for grants in aid, for studies on river pollution, for a complete legislative reporting service, for publishing semi-monthly conservation news, for sponsoring wildlife week. 300,000 pieces of literature go to teachers and pupils. 4-6 fellowships of \$1000 a year on Ding Darling scholarships will include a system for evaluation of landscape, a handbook for conservation clubs, an evaluation of teachers' workshops, a study of wildlife journalism and one on mass education.

#### NATURE CONSERVANCY —

The last virgin stand of timber in Connecticut was cut over at Colebrook in 1912. Two natural areas in Conn. are now set up, one of 52 acres at Audubon Center in Greenwich, the other at Conn. Arboretum. One at the Yale Preserve will be established when a long range policy is established. A salt marsh is needed as a control area to evaluate and compare sprayed and other disturbed areas. The Nature Conservancy is working on this.

**There are 91 State Owned Refuges** in Connecticut, but their value is limited by size, habitat, disturbance, lack of buffer areas and bad surroundings.

**There are 12 Private Sanctuaries** in Connecticut

**WOOD CHIPS** were the subject of discussion at the luncheon meeting on forestry. Chips, mostly from white pine, can be used for mulch, bedding, soil improvement. Chips made from dry and seasoned wood can be used to amend the soil, making it more friable, usually in the form of mulch; for holding road banks; on army drill fields; for poultry litter and bedding for horses or cattle. Its ultimate cost may be about \$12.50 a ton. The best chips come from sticks 2 to 4 inches thick. When chips are mixed with the soil, some nitrogen may be needed to counteract that used up in the process of decay. Most farmers think that wood, in any form, is poison to the soil. They say it "sours it." A great deal of education will be needed to counteract this long established, but false belief.

Leonard Bradley, who kindly supplied us with this information, regretted that the discussion did not deal with roadside trimmings or trimmings from power rights-of-way. This is mixed woody and green material which often contains leaves and all.

## a barn swallow study

At the Wharton Bird Banding Station, Groton, Mass., 2469 nestling and adult Barn Swallows were banded in a 14-year period.

From records of 1939 nestlings, it was learned that 374 first broods averaged 4.25 viable nestlings per brood, 101 second broods, 3.34. Of first broods, 43% contained 5 nestlings, 29%, 4. Four-nestling broods comprised 40% of second broods. About 50% of the breeding population raised second broods. Twenty-nine broods contained 6 nestlings. The species hatches a high percentage of eggs laid, and raises a large proportion of young hatched.

It was noted that extremes of both hot and cold weather had adverse effects upon the nestling population. A population of 17 nestlings in one barn suffered a mortality rate of 64.7% during a cold, wet period. On the other hand, high temperature inducing nestling mortality is the result of a several-day-period of hot, clear weather, which builds up extremely high temperatures near the roof of the barn. The structure of the barn and its orientation are also factors, roof construction features of more modern barns being more likely than old ones to contribute to the building up of extreme temperatures.

Eighty per cent of the returns were adult when banded, 20% were nestlings.

From 381 adults banded, 34% returned, with a sex ratio of 93 males to 100 females. Only 2% of the nest-



lings banded returned, with a sex ratio of 2,000: 100.

The entire adult population gave a sex ratio of 117:100.

An annual mortality of 73.44% is indicated for the species.

Three birds lived to at least 6 years, two to 7, and one to 8 years. This highly interesting information is a summary of the study made by Edwin A. Mason, now director of the Arcadia Sanctuary in Northampton, Mass. Complete data appeared in BIRD-BANDING, a Journal of Ornithological Investigation, July, 1953. We are grateful to Ed for allowing this use of his report and are sorry that it had to be so condensed to fit our limited space.

## contributors to our book club

The following names have been added to the list of donors to our special book club: Miss Pauline H. Dederer, Mrs. H. P. Gongaware, John J. O'Neil, Mrs. Winifred S. Passmore, Mrs. Earle Stamm, and Miss Jesse Watters. Books that have been added include:

THE GIRL SCOUT HANDBOOK  
FIELD BOOK OF COMMON  
FERNS by Herbert Durand  
FIELD BOOK OF EASTERN  
BIRDS by Roger Tory Peterson  
FIELD BOOK OF WESTERN  
BIRDS by Roger Tory Peterson  
FIELD GUIDE TO WATER BIRDS  
by Richard H. Pough  
A FIELD GUIDE TO THE BUT-  
TERFLIES by Alexander B. Klots

We are also adding the Golden Nature Guides by Herbert S. Zim. You will note that we are adding to our field guide series. This year's Trailside Museum will have a special reference table (in addition to the library) that you may use for study and research while at the Sanctuary. Your name can be added to our list of book donors for a five dollar donation. A good nature book will be selected by us and added to our library.

## items for sale at the trading post

Visit our Trading Post when you have need for any of the following items:

|                                              |        |
|----------------------------------------------|--------|
| Note Paper (20 sheets, 20 envelopes) per box | \$1.00 |
| Audubon Bird Call                            | \$1.25 |
| Suet Rack & Cake                             | \$1.70 |
| Extra Suet Cakes (Pkg of 3)                  | \$1.10 |
| Suet Logs (filled)                           | \$1.50 |
| Suet Log Refills, per doz                    | .50    |
| Wild Bird Feed (special mixture) per lb      | .25    |
| Bird Boxes and Bird Feeders                  |        |

NOTE: All items mailable except bird feeders and wild bird feed. Conn. residents add 3% sales tax.

## did you know... that

- the opossum bears from 3 to 17 young that are smaller than honeybees when born but are able to crawl to the fur-lined pouch where each remains until about the size of a mouse?
- the plentiful plump seeds of smartweeds and knotweeds furnish from a tenth to a quarter of the food for wild ducks, upland game birds and many songbirds? Some of the smartweeds grow in moist soils and swamps, others in well-drained uplands. They belong to the family Polygonum, meaning "many knees" because their stems have swollen knots or joints and often make zigzag bends where the leaves are attached. Buckwheat is a Polygonum brought here by the early colonists.

- the king snake preys on other snakes, including poisonous ones—but the black snake does not? It is a popular myth that blacksnakes and rattlers are never found together.

- only man has the power of eating small, large and medium sized foods indiscriminately? This is one of the most important ways in which he has gained control over his surroundings.

- both the hornbeam and the hop hornbeam, members of the birch family and so-called "weed trees," have considerable value to wildlife? Deer browse on the twigs and foliage while the seeds are important winter food for quail, ruffed grouse, finches, grosbeaks, squirrels and white-footed mice.

- one of the large, black southern blueberries has a tight corolla that only carpenter bees can get into, and carpenter bees need old wood to live in? If the territory has been cleared off—no old houses, no old fence posts—the blueberries die off. This has happened in some places.

- the residues of plants return more to the soil than the green plants have taken away? But many people still burn plant debris sending their soil capital up in smoke.



Howard Cleaves "shooting" with his gun stock camera.

no trees stricken with the dread "oak wilt" have been discovered in New York State according to THE CONSERVATIONIST, but the disease has occurred in nearby Pennsylvania? Oaks with dead or dying foliage should be brought to the attention of professional foresters.

- the "Russian sunflower" is a plant native to this country but grown more successfully elsewhere, as is the case with many transplanted animals and plants?

## postscript

The report on DDT that appeared in our last issue is not a final word on the subject. Lest it may have seemed so, we should like to emphasize the use throughout that report of the word "apparent." Such observations as were made in the sprayed areas revealed no apparent harmful effects. But, since we have no adequate control areas under careful scientific observation on which to base our evidence, this does not mean there were no indirect repercussions on other forms of life like bats and swallows, for example, whose food supply could be seriously diminished at critical periods. In any case, we were glad to hear that the DDT had been used with great care.

## screen tour — animals are seen at night in color

A new and different type of film will be shown at the next Audubon Screen Tour. On Thursday evening, January 21, Howard Cleaves will present his newest film, "Animals at Night in Color," in Buell Hall at 8 o'clock.

Wild animals work on two shifts, the day shift and the night shift. By means of a portable gasoline generator the night shift is turned into day by Mr. Cleaves through powerful flood lights penetrating 150 feet or more. Under the spell of the strong light beam, deer become transfixed, their eyes glowing like live coals in the dark. With clever devices for mounting lights on a tripod with his camera, on the bow of a boat, and even on his own shoulders, Mr. Cleaves has prowled through forest and bayou to record the night life of deer, raccoon and muskrat; osprey, chimney swift and great blue heron; turtle, frog, cicada, and other wildlife in full natural color.

Mr. Cleaves is an ace wildlife photographer having started in 1913 under the tutelage of Thomas A. Edison. He has also gained nation wide fame as a writer and lecturer. "Animals at Night in Color" promises to be one of our best Screen Tours. Don't miss it!

## you will like this book

You can take 365 trips afield amid the wonders of nature without ever leaving the comfort of your living room chair if you will but read "Circle of the Seasons" by Edwin Way Teale. In journalistic fashion Mr. Teale reveals the happenings in nature in such a delightful manner that one has the feeling of being afield with him. However, this fine book is not confined to field observations alone for it is often accounts of events and the recordings of the thinking of this great naturalist.

"Circle of the Seasons" is Mr. Teale's journal of a year—not a particular year but an account of the seasons as he has come to know them. It is also an account of the beliefs and philosophy of a life-long naturalist such as those found in the concluding sentence—"In the endless repetitions of nature—in the recurrence of spring, in the lush new growths that replace the old, in the coming of new birds to sing the ancient songs, in the continuity of life and the web of living—here we find the solid foundation that, on this earth, underlies at once the past, the present, and the future."

"Circle of the Seasons" by Edwin Way Teale, Dodd, Mead & Co., New York, 1953. Illustrated, \$4.00.

## audubon society has christmas bird count

Common Loon 3, Horned Grebe 113, Cormorant 2, Black-crowned Night Heron 1, Canada Goose 146, Mallard 79, American Widgeon 4, Greater Scaup 140, American Goldeneye 144, Bufflehead 253, Surf Scoter 57, American Merganser 55, Red-tailed Hawk 1, Pigeon Hawk 1, Bob White 2, Greater Yellow-legs 1, Great Black-backed Gull 28, Ring-billed Gull 114, Belted Kingfisher 4, Hairy Woodpecker 3, Blue Jay 23, Fish Crow 1, White-breasted Nuthatch 7, Brown Creeper 1, Carolina Wren 1, Golden-crowned Kinglet 3, Cedar Waxwing 19, Myrtle Warbler 76, Palm Warbler 1.

Eastern Meadow Lark 12, Rusty Blackbird 175, Bronzed Grackle 125, Cardinal 2, American Goldfinch 3, Sharp-tailed Sparrow 3, Tree Sparrow 13, White-throated Sparrow 54, Snow Bunting 2, Red-throated Loon 11, Pied-billed Grebe 6, Great Blue Heron 13, Mute Swan 17, American Brant 2, Black Duck 1507, Green-winged Teal 5, Lesser Scaup 1, Barrow's Goldeneye 2, White-winged Scoter 36, American Scoter 5, Red-breasted Merganser 174, Marsh Hawk 2, Sparrow Hawk 3, Killdeer 10.

Purple Sandpiper 10, Herring Gull 945,

Bonaparte's Gull 4, Yellow-shafted Flicker 3, Downy Woodpecker 8, American Crow 71, Black-capped Chickadee 47, Redbreasted Nuthatch 3, Winter Wren 1, Eastern Bluebird 28, Ruby-crowned Kinglet 1, Common Starling 445, Pine Warbler 2, House Sparrow 107, Red-winged Blackbird 178, Purple Grackle 500, Brown-headed Cowbird 5, Purple Finch 2, Eastern Towhee 4, Slate-colored Junco 73, Field Sparrow 2, Song Sparrow 15.

Birds not included in Audubon Society official Christmas Count Bird List: Brunnich's Murre 4, Tree Swallow 3, Dickcissel 1, Rock Dove 23, Blue-gray Gnatcatcher 1.

SPECIES 80, INDIVIDUALS 5953.

OBSERVERS: Belton Copp, Richard H. Goodwin, Dicko Goodwin, Bennett R. Keenan, Mrs. Frank J. Kohl, Robert Fulton Logan, Thomas P. McElroy, Mr. and Mrs. John Merrill, Waldo L. Miner, Jr., Maynard W. Peterson, Mrs. Jack Rosenthal, Mr. and Mrs. Thomas E. Troland, Paul Waldron.

## another one in westport

A recent communication from Mrs. Robert S. Lemmon of the Westport Audubon Society included a report on their annual Christmas Count. 28,000 birds were reported representing 108 distinct species. The most gratifying part of this report seems to be that 110 observers participated in the count—41 in the field and the others reporting from their feeding stations. Among the highlights of the count was the recording of 13 species of ducks, 7 of owls, 2 yellow-breasted chats, a phoebe, a catbird, and 317 song sparrows.

## spring planting

We are planning an extensive planting program at the Sanctuary this spring insofar as budget permits. Following is a list of some of the common trees and shrubs that we can use in our planting plans. Perhaps you would like to help make these plans a success either by contributing actual planting stock or by supplementing our budget for this purpose. Either type of help will be very much appreciated.



Flowering Crab  
Flowering Dogwood  
Hawthorns (any of the Crataegus group)  
Mountain Ash  
Mulberry  
Norway Spruce  
White Spruce  
Viburnums (any food-bearing variety)  
Korean Barberry  
Asiatic Sweetleaf  
Buckthorn

## roger t. peterson coming soon!

Roger Tory Peterson, America's foremost bird artist and ornithologist, will be the featured speaker at our Audubon Screen Tour on February 21. He will also present an all-colored motion picture titled "Wild America."



roger tory peterson, who will present our february screen tour, at work in his studio.

Through his "Field Guide to the Birds," Mr. Peterson has probably interested more people in birds than any other person in America. It's a program you won't want to miss. Reserve the date now!

## trout are available from state



The State Board of Fisheries and Game announces that fingerling trout from state hatcheries are available for purchase by private pond owners. Applications for the purchase of trout may be obtained at the office of the State Board of Fisheries and Game, from the District Conservation Officer (District Warden) and from County Agents. Applications should be filled out and returned to the State Board of Fisheries and Game by mid-September.

Pond owners will be notified by mail of approval of application and of number and kinds of trout allotted for purchase. They will also be informed of the period of days in October during which the trout fingerlings may be picked up at the hatchery. Instructions will be given at that time as to the size of the container which should be brought for transporting the live fish allocated.

Trout fingerlings will cost \$5.00 per hundred and will be purchased at the state trout hatchery in Burlington on Route 116.

## how do we look?

The old format never quite suited us, hence the change with this issue. It is an attempt at unity, reading ease, economy of space and good looks. Do you think it has succeeded?